VOLUME 8 ISSUE 2

# Spaces and Flows: An International Journal of Urban and ExtraUrban Studies



## Mapping Urban Interfaces

### A Typology of Public/Private Interfaces in Informal Settlements

HESAM KAMALIPOUR

COMMON GROUND

SPACESANDFLOWS.COM

**SPACES AND FLOWS: AN INTERNATIONAL JOURNAL OF URBAN AND EXTRAURBAN STUDIES**
http://spacesandflows.com
ISSN: 2154-8676 (Print)
ISSN: 2154-8684 (Online)
http://doi.org/10.18848/2154-8676/CGP (Journal)

First published by Common Ground Research Networks in 2016
University of Illinois Research Park
2001 South First Street, Suite 202
Champaign, IL 61820 USA
Ph: +1-217-328-0405
http://cgnetworks.org

*Spaces and Flows: An International Journal of Urban and ExtraUrban Studies* is a peer-reviewed, scholarly journal.



Common Ground Research Networks, a member of Crossref

# Mapping Urban Interfaces: A Typology of Public/Private Interfaces in Informal Settlements

Hesam Kamalipour, University of Melbourne, Australia

*Abstract: Urban interfaces play a key role in enabling the different forms of social and economic exchange and the ways in which open space is contested and appropriated in informal settlements. Many upgrading practices involve a transformation of public/private interfaces. The transition between public and private territories is one of the critical issues in planning, urban design, and architecture that has the capacity to enable or constrain exchange and production. This paper develops a typology for analysing and mapping public/private interfaces in informal settlements. Drawing on the evidence from multiple case studies of informal settlements in Southeast Asia, South Asia, and South America, a typology of six interface types is introduced based on the criteria of proximity and connectivity. The study is informed by direct observation, visual recordings, and urban mapping to shed light on the ways in which urban interfaces work in informal settlements.*

*Keywords: Urban Interface, Informal Urbanism, Typology, Urban Morphology, Urban Mapping, Public Open Space*

## Introduction

Urban interface has been one of the critical concerns in architecture, urban design, and planning. It refers to the threshold between public and private space in urban environments. The boundaries between publicity and privacy are often subject to appropriation, transgression, and negotiation. The urban interface is a transitional zone, where social encounters and economic exchanges take place. It has been argued that public/private interfaces have the capacity to construct different identities and enable or constrain street-life intensity (Jacobs 1961; Bentley et al. 1985; Gehl 2010; Dovey 2016). In a sense, different parts of a city are recognisable due to the differences and resemblances between their urban interfaces. If one moves from the aerial photos to the ground level, urban interfaces are the key perceptual elements that are immediately visible from the public space. While most of the studies on urban interfaces focus on the cities of the global North (Gehl 1987; Bobić 2004; Gehl, Kaefer, and Reigstad 2006; Dovey and Wood 2015), the micro-scale dynamics of public/private interfaces in informal settlements are underexplored in the literature.

It has been estimated that about one billion people live in informal settlements (UN-HABITAT 2006). These settlements are socio-politically the result of what Bayat (1997) characterises as the prevailing silent encroachments of the ordinary people. As Roy (2011) argues, informal settlements are the territories of vibrant urbanism, habitation, and livelihood. In this sense, urban informality is a critical resource for managing the condition of poverty (Dovey 2013) and moving beyond the regulatory order (Simone 2009). However, urban informality is a complex, uncertain, and multidimensional concept (McFarlane and Waibel 2012; Gilbert 2004; Tonkiss 2013). While most of the studies on informal urbanism have focused on the macro-scale issues of governance, policy, and socio-political processes (Roy 2004; Roy 2005; Bayat 2004; Davis 2006; McFarlane 2012), the micro-scale forms of urban informality are relatively understudied (Duarte 2009; Brillembourg and Klumpner 2010; Dovey and King 2011; Kamalipour 2016a). It has been elaborated that a sophisticated understanding of urban morphology is critical for better design interventions (Marshall and Çalişkan 2011), which can play a critical role in the process of upgrading informal settlements (Karimi and Parham 2012; Echeverri Restrepo and Orsini 2012; Desai 2010). Although many upgrading approaches

*Spaces and Flows: An International Journal of Urban and ExtraUrban Studies*
Volume 8, Issue 2, 2016, www.spacesandflows.com

ISSN: 2154-8676 (Print), ISSN: 2154-8684 (Online)
https://doi.org/10.18848/2154-8676/CGP/v08i02/1-12

incorporate a transformation of the public/private interfaces, there is not any typology for mapping the complexity of these interfaces in informal settlements.

This paper explores the ways that private spaces are connected to the public realm in informal settlements in order to develop a typology of urban interfaces. The key research question investigates the relations between public open spaces and private spaces in informal settlements. Morphological mapping and spatial analysis of informal settlements can benefit from the proposed typology. It has been argued that the urban theories and ideas developed in the global North need to be reconsidered to incorporate the dynamics of rapid urban growth and informal urbanism in the cities of the global South (Parnell and Robinson 2012; Robinson 2002). This study departs from the typology introduced by Dovey and Wood (2015), but critically investigates the existing typologies of urban interfaces, which are mostly based on "formal" cities, to develop a typology of public/private interfaces drawing on multiple case studies of informal settlements from the cities of the global South. The database for developing the typology derives from three case studies of informal settlements in the cities of Bangkok (Thailand), Pune (India), and Medellin (Colombia). The selected case studies incorporate different morphologies in terms of density, functional mix, access network, and settlement types that give rise to a range of different urban interfaces.

This study aims to develop a typology of public/private interfaces in informal settlements based on evidence from multiple case studies. The developed typology is then applied for mapping one of the main laneways in each of the study areas. Unlike some parts of the formal cities such as most of the suburban developments where the urban interfaces follow a fairly consistent pattern, informal settlements incorporate mixed conditions, which make mapping often harder, yet more interesting. Mapping is particularly challenging when the developed typology becomes unsettled due to the loose boundaries and slippage between different types. However, this problematic situation can be considered as a key for understanding how informal practices and creative appropriations take place to manage the condition of poverty in informal settlements.

## Urban Interfaces

The interface between public and private space is a transitional space in which the private domain connects to the public realm (Carmona 2010; Dovey and Wood 2015; Bobić 2004). The capacity of urban interfaces for contributing to urban life and safety has been outlined in the seminal work of Jacobs (1961) where she argues about the ways that urban drama takes place on streets and sidewalks. For Alexander, Ishikawa, and Silverstein (1977) liveliness of urban space is closely related to the ways in which the surrounding urban edges of that space work. That is why Bentley et al. (1985) emphasise the critical role of interface design in activating the edges of public open spaces. Drawing on Benjamin (1978), Dovey and Wood (2015) argue that public/private interfaces play a key role in understanding the concept of "urban porosity" as the improvisational transgression of socio-spatial boundaries. Moreover, it has been noted that urbanity and character are closely related to the quality of interfaces (Bobić 2004). For Lynch (1960), urban edges play a critical role in the way that urban environments can be imageable and visually identifiable. Norberg-Schulz (1980) refers to the importance of the inside/outside boundaries in defining spatial identity. Boundaries have the capacity to control the relations between the two domains of "potential strangers" and "inhabitant" (Hillier and Hanson 1984). Stevens (2006) argues that the publicly open thresholds can offer sensory information including smell and sound where the socio-spatial boundaries between inside and outside are loose and blurry. Gehl, Kaefer, and Reigstad (2006) elaborate on the distinctions between pedestrian-based and car-based edges and shed light on the confusions between these two scales in the modern city. Using the categories of "necessary," "social," and "optional" activities in public space (Gehl 1987), Dovey and Symons (2013) report that social activities, such as communication, and

optional activities, such as recreation, often take place in proximity to porous urban interfaces. Although the study of urban edges has been a part of the urban design theory since the 1960s, the proposed micro-scale typologies of public/private interfaces are relatively limited.

Gehl (1987) has outlined a continuum between "soft" and "hard" urban interfaces based on the criteria of permeability, sociability, and activity. This typology focuses on the ways that urban interfaces can most effectively contribute to public space and urban life. Gehl, Kaefer, and Reigstad (2006) have further illustrated five types of urban interfaces ranging from the most permeable (active) to the most impermeable (inactive) ones based on the conditions of details, activity, and grain size. Although this typology entails a useful way of thinking about urban interfaces by proposing a kind of design-oriented tool, it is hardly applicable to informal settlements due to its proposed measures, which are based on the collected data from some parts of the formal cities. However, the proposed typology has not been developed for mapping public/private interfaces in informal settlements where the number of entrances and interface variations are often different to those of the formal cities (Kamalipour 2016b). While the developed typology sheds light on the perceptual dimension of urban interfaces, it does not necessarily make a distinction between functional and morphological aspects of public/private interfaces.

Bobić (2004) has developed a detailed classification of interface types/sub-types based on the criteria of design quality, transparency, setback, and behaviour. In fact, this is one of the most detailed typologies developed for the study of urban interfaces with seven main types and forty sub-types based on socio-spatial and perceptual criteria. This typology offers a detailed categorisation for exploring a variety of entrances. However, it neither includes impermeable interfaces nor makes a distinction between car and pedestrian access, which are critical in the formation of different types of urban interfaces. Moreover, the extensive number of types and sub-types decreases the applicability of this typology for mapping purposes.

Dovey and Wood (2015) propose a typology of public/private interfaces based on the criteria of accessibility, transparency, directness, and access mode. The developed typology comprises five types: impermeable/blank, direct opaque, direct transparent, pedestrian setback, and car setback. This is a mapping-oriented typology, which adopts a descriptive approach to investigate the ways public/private interfaces work at the microscale. It explores the capacities and adaptability of urban interfaces by focusing on the materiality of the public/private edges. This typology provides a useful toolkit for mapping public/private interfaces in different urban environments. While the criteria and types are clearly outlined, some interfaces such as "impermeable transparent" and "setback transparent" are not included as specific types. These urban interfaces are fairly common in most of the central business districts of the formal cities. However, one of these types (impermeable transparent) has been included in an earlier typology introduced by Dovey and Symons (2013) for the spatial analysis of the Southbank hinterland in the city of Melbourne. Both of these typologies rely on the legal cadastral boundaries that are enforced through formal processes. This may become problematic for the spatial analysis of informal settlements where such boundaries are neither legal nor formally enforced.

## Research Methods

This research explores multiple case studies to analyse a range of different urban interfaces in informal settlements. It has been argued that multiple case studies can provide more robust and convincing evidence (Herriott and Firestone 1983; Yin 2003). As Neuman (2011) suggests, the selected case studies meet the factors of data richness and accessibility for the field researcher. Interface types are developed based on a range of examples from different informal settlements, which incorporate data richness in terms of different urban morphologies and public/private interfaces. The selected case studies include three informal settlements of Khlong Toei in

Bangkok, Yerawada in Pune, and Santo Domingo in Medellin to provide maximum variation in urban interfaces and morphologies.

Fieldwork took place in these three cities from 2014 to 2015. Direct observations, visual recordings, and urban mapping are the key research methods. Most of the required data on urban interfaces has been collected through direct observation. Visual recordings including urban photography and video recording have been used as complementary methods to fill the possible gaps of direct observation (Peimani and Kamalipour 2016). As Gehl and Svarre (2013) argue, such methods can assist researchers to go into further details in the areas and situations where data collection and complete documentation through direct observation is difficult. Informal settlements are one of those sensitive areas that can make the process of data collection difficult since external visitors and their activities are often immediately recognised by the inhabitants. The collected data on urban interfaces from different case studies has been compiled in a database and further explored for developing different types of public/private interfaces in informal settlements.

## Typology

Public/private interfaces form a transitional zone between the public realm and private territories (Dovey and Wood 2015). Observations show that in most of the informal settlements, these are the boundaries through which the relations between private and public spaces are framed and mediated. Although negotiation plays a key role in informal settlements, this typology focuses on the materiality of public/private interfaces in these settlements. Figure 1 shows how the proposed typology is based on two key variables of connectivity and proximity:

1) Connectivity: this variable refers to the degree to which a private territory is connected to the public space. Connectivity varies from an "impermeable" interface, which is entirely disconnected from the public space to a "porous" interface, which is highly connected to the public space. An "accessible" interface is an in-between condition where a private space is only connected to the public space through a point of entry.
2) Proximity: this variable refers to the extent to which a private territory is close to the public space. Proximity varies from an "adjacent" interface, which is directly attached to the public space, to a "distant" interface, which is relatively detached from the public space by means of either a setback or a setfront. It indicates the degree to which a range of different activities and loose parts can be accommodated within a semi-private threshold.

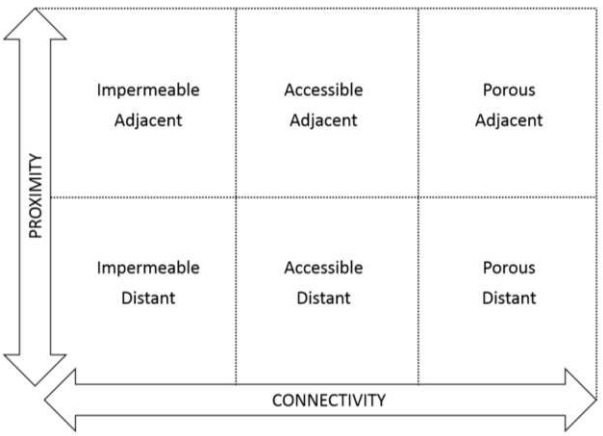
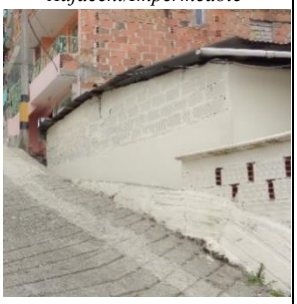
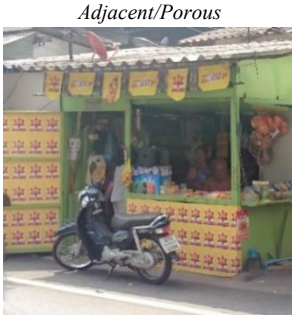
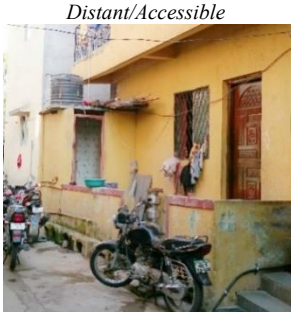



Figure 1: Interface Types in Informal Settlements
*Source: Kamalipour 2016*

Figure 1 illustrates the matrix of public/private interface types, which vary in terms of connectivity and proximity. The matrix indicates six types of public/private interfaces including adjacent/impermeable, adjacent/accessible, and adjacent/porous on one end and distant/impermeable, distant/accessible, and distant/porous on the other. In fact, the proposed typology indicates a co-existing twofold condition rather than a dichotomy. There is a dynamic continuum between the two ends of either connectivity or proximity. As Marshall (2009) argues, the public-private relation is a spectrum rather than polarisation. The number of interface types could have been more extensive to include the other in-between conditions. However, it has been pointed out that the number of types in a typology is better not to exceed the limit of seven to be effectively held in mind and easily legible on a map (Dovey and Wood 2015; Miller 1956). Hence, the number of the proposed interface types is limited to six in order to reach a balance between covering all of the typical conditions of urban interfaces in informal settlements and making the developed typology applicable for mapping.

Table 1: Examples of Different Types of Urban Interfaces

| | | *Connectivity* | | |
|---|---|---|---|---|
| | | *Impermeable* | *Accessible* | *Porous* |
| *Proximity* | *Adjacent* | *Adjacent/Impermeable*  | *Adjacent/Accessible*  | *Adjacent/Porous*  |
| | *Distant* | *Distant/Impermeable*  | *Distant/Accessible*  | *Distant/Porous*  |

*Source: Kamalipour 2016*

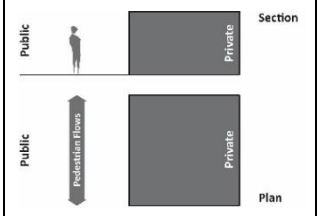
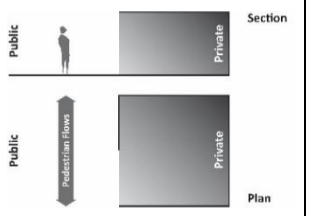
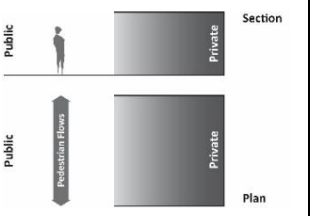
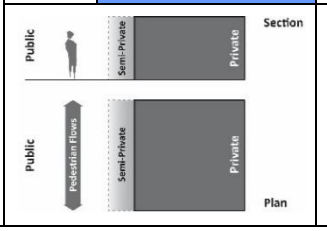
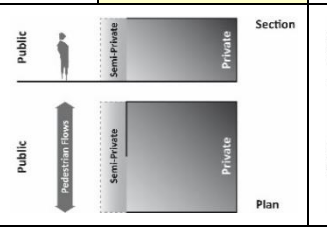
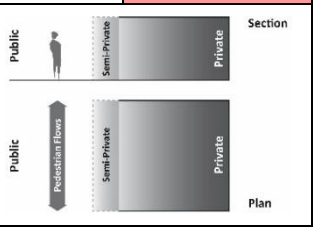
Table 1 shows examples of different types of urban interfaces from the study areas. The adjacent/porous type refers to a condition where inside and outside are directly and highly connected to each other to facilitate the flows of people, goods, and products between public and private spaces. This type is often recognisable with a mix of uses including residential and retail. The other common examples of this type are the highly connected urban interfaces of the stand-alone shops in informal settlements. The adjacent/accessible type is a common pattern in most of the mono-functional parts of the informal settlements. This type includes most of the residential buildings that are often merely accessible from the public space through an entrance. There is no physical distance between private and public spaces in this type. The adjacent/impermeable type refers to the blank walls or impermeable interfaces that are attached to the public space. While

the impermeable interfaces do not often contribute to the public space, they incorporate the capacity for accommodating some temporal activities and loose parts in informal settlements. The distant/porous type refers to a highly connected interface that has a setback from the public space. Since this type is fairly common in the areas with a mix of residential and retail, it provides an in-between space that can be appropriated for extending shopfronts. The distant/accessible type refers to those urban interfaces that are connected to the public space through a setback and entrance. This setback condition provides a semi-private space for storing construction materials, furniture, and other loose parts in informal settlements. The last type of urban interfaces is impermeable/distant, which is less common in most of the informal settlements in comparison to the other interface types. This type includes a blank wall or an impermeable interface with a setback from the public space. This setback can also be appropriated to accommodate a range of loose parts and activities in informal settlements.

## Urban Mapping

Table 2 indicates a mapping protocol based on the developed types of urban interfaces. The proposed method of mapping public/private interfaces illustrates the variations of connectivity and proximity using different colour codes to indicate three conditions of connectivity (impermeable, accessible, porous) and different colour intensities to show the two conditions of proximity (adjacent, distant). Three colour codes of blue for impermeable, yellow for accessible, and red for porous interfaces have been selected to indicate variations of connectivity. In a sense, connectivity of urban interface increases as one moves from blue (impermeable) to yellow (accessible) and then to red (porous). Distinctions between adjacent and distant types are manifested in two intensities of the same colour codes. Hence, light blue, yellow, and red indicate distant types while dark blue, yellow, and red show adjacent types. In this way, an urban interface becomes less attached to the public space as one moves from dark to light colours.

Table 2: A Mapping Protocol Based on the Developed Types of Urban Interfaces

| | | *Connectivity* | | |
|---|---|---|---|---|
| | | *Impermeable* | *Accessible (up to 50%)* | *Porous (>50%)* |
| *Proximity* | *Adjacent (up to 50CM)* | *AI* | *AA* | *AP* |
| | |  |  |  |
| | *Distant (>50CM)* | *DI* | *DA* | *DP* |
| | |  |  |  |

*Source: Kamalipour 2016*

While examples of the impermeable types are easily recognisable for mapping purposes, the ratio between the length of openings and the overall length of an urban interface becomes a key factor for making a distinction between accessible and porous types. For mapping purposes, an urban interface will be considered porous if more than 50 percent of its overall length is opened up and connected to the public space. In most informal settlements, this is often either a vertical mix of a shop on the ground floor with residential units on the upper levels or a stand-alone shop. An urban interface will be considered accessible if up to 50 percent of its overall length is connected to the public space. An example of that, which is common in most of the informal settlements, is a residential unit with an entrance on the ground floor. An interface will be considered distant if it is located more than 50cm away from the public space. Hence, an urban interface will be considered as adjacent if it is located up to 50cm away from the public space. The developed protocol for urban mapping derives from a desire for enhancing consistency across different case studies rather than quantifying the criteria of connectivity and proximity.

The developed typology is applied to multiple case studies of informal settlements using the introduced mapping method in order to unravel the variations of urban interfaces across different informal morphologies. One of the main laneways in each of the case studies is mapped to indicate how different types of public/private interfaces play out in relation to each other. Figure 2 shows that all of the three case studies accommodate a range of different interface types. While setback condition is fairly common in the case study of Medellin, most of the public/private interfaces in the case study of Bangkok are directly connected to the public realm. The case study of Pune has a mix of both conditions. The adjacent/accessible type is the common public/private interface in the case study of Bangkok. In contrast, the distant/accessible is the common urban interface in the case study of Medellin. While there are some adjacent/porous interfaces in the case studies of Bangkok and Pune, the number of the porous types are quite limited in the case study of Medellin. The impermeable interfaces in the case studies of Medellin and Pune are more than the same in the case study of Bangkok. In the case of Pune, most of the adjacent/impermeable interfaces are located along the minor laneways intersecting with the main laneway. The case study of Medellin incorporates some adjacent/impermeable interfaces on one side of the main laneway. Most of the impermeable types in all of the case studies provide a spatial possibility for accommodating some loose parts. Similarly, most of the distant types accommodate a range of different activities such as drying, cooking, washing, seating, and socialising within a setback or setfront space.

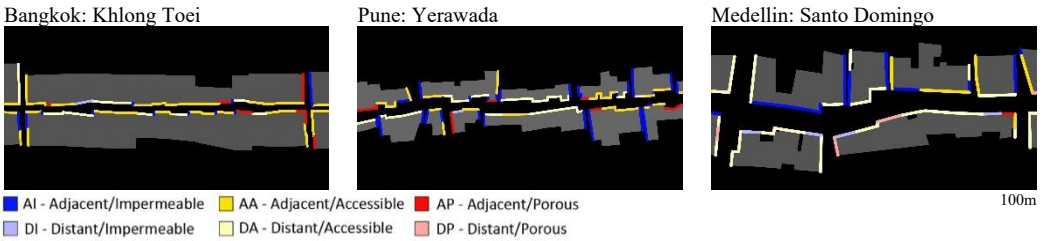



Figure 2: Applying the Developed Typology for Mapping Urban Interfaces in Informal Settlements
*Source: Kamalipour 2016*

## Discussion

A typology of public/private interfaces has been developed drawing on a database of multiple case studies and further applied for mapping a part of different informal settlements in the cities of Bangkok, Pune, and Medellin. The need for developing a typology of urban interfaces in informal settlements is linked to the ways in which current urban studies emphasises the role of urban interfaces in research on place-making and urban codes (Dovey and Wood 2015). The desire for developing a typology of urban interfaces in informal settlements is related to the ways

in which it can inform urban mapping. Mapping public/private interfaces based on the identified types can be most informative when it is accompanied by a range of other layers of mapping, including functional mix, grain size, public activities, building density, street-life intensity, and access network to explore how an urban environment works. In this way, a map of urban interfaces can be comparable to the other layers of mapping in the same area to provide a better understanding of the relations between elements of urban morphology and public life in urban assemblages.

Drawing on a distinction made by Sennett (2011) between borders as nodes of activities and boundaries as socio-spatial dividers, the proposed typology suggests that a change in the condition of connectivity and proximity can be considered as an incremental transformation between boundary and border conditions. In a sense, a change from an impermeable to an accessible and then to a porous interface is in a way a socio-spatial transformation from boundary to border condition in informal settlements. A change from impermeable to porous urban interfaces is often accompanied by a change from mono-functionality to a mix of functions. In a sense, a rigid division between private and public territories can then become an activity node. Such nodes have the capacity to improve the quality of the physical environment and attract not only pedestrian flows but also a range of what Gehl (2010) calls "optional" and "social" activities. In this way, the proposed typology of urban interfaces in informal settlements sets the ground for exploring how urban interfaces are related to different public activities and street-life intensity.

One of the limitations of the developed typology is linked to the ways in which types are defined and further implemented in the processes of urban analysis, design, and control. The types developed based on the key variables of connectivity and proximity refer to the condition of a co-existing twofold rather than a dichotomy or dialectic (Dovey 2010). The study suggests that the developed typology and the proposed types are not some eternal truths or archetypes since they have emerged out of an ongoing process of experimenting and urban mapping to explore the ways in which urban interfaces can enable or constrain exchange, encounter, and production. While the proposed typology is based on a database of multiple case studies from different cities in the global South, the identified types of urban interfaces are not entirely settled. This is partially related to the fact that most of the public/private interfaces in informal settlements are often in the process of incremental transformation, which opens up the space of possibility for loosening the boundaries between the identified types. The process of encroaching onto the public space is one of the other factors that often makes the distinction between the identified types rather problematic for mapping. This links to the fact that the thresholds between public and private territories in informal settlements are the spaces of contestation and negotiation.

Mapping public/private interfaces using the developed typology and mapping protocol can inform analysis, diagnosis, design, and control in the process of incremental transformation of informal settlements by unravelling the ways in which urban interfaces work in these areas. Since most of the informal settlements and many traditional cities have morphologically emerged through processes of self-organisation and adaptation, the developed typology may also apply to such fairly unplanned cities. However, there is no claim here for such applicability as the developed typology is based on evidence from multiple case studies of informal settlements rather than the traditional cities. Moreover, since this typology focuses on the physical manifestations of the relations between publicity and privacy in informal settlements, exploring the relations between the underlying sociocultural contexts and urban morphologies (Kamalipour and Zaroudi 2014) can be the subject of future studies. As incremental change is inevitable in informal settlements, future studies can also investigate the ways that different types of public/private interfaces adapt over time.

Typology has been considered as a critical departure point for addressing spatial problems in the process of design where types are abstractions rather than actual buildings (Kelbaugh 2007).

Drawing on Deleuzian conception of assemblage thinking (De Landa 2006; Deleuze and Guattari 1987; Dovey 2010), it has been pointed out that type is a diagram, illustrating the relations between things. Hence, it is neither an object nor an essence. That is why Dovey and Wood (2015) argue that a type cannot be reduced to either function or form. In a sense, the typology can be understood as a diagrammatic way of thinking about the ways public/private interfaces work in informal settlements (Kamalipour and Peimani 2015). In this sense, it has the capacity not only to describe the existing condition of urban interfaces but also to focus on the possible ways forward. The proposed typology can inform the ways that architects and urban designers can most effectively engage with the incremental transformation of urban interfaces by producing a kind of spatial knowledge and providing a sophisticated understanding of the critical role of public/private interfaces in informal settlements. In this way, the developed typology is a kind of abstraction that can unravel what De Landa (2005) calls "real virtuality" that refers to those parts of the reality that have not been actualised yet. Hence, it can open up the space of possibility for design interventions with a focus on the key role of public/private interfaces in mediating street-life intensity and public activities in informal settlements. This is the role that has been relatively overlooked in most of the upgrading approaches that tend to demolish and replace informal settlements with some mid-rise apartments. Such approaches disrupt how social encounter and economic exchange work at the ground level through different types of urban interfaces. While the developed typology cannot directly solve such problems by itself, it has the capacity to inform the micro-scale mapping and spatial analysis of urban interfaces and shed light on the ways in which different types of public/private interfaces work in informal settlements.

## Acknowledgement

The author receives IPRS and APA scholarships from the Australian Government and funding from the Melbourne Social Equity Institute (MSEI). The author wishes to thank Professor Kim Dovey for his endless support and the anonymous reviewers for their time, incisive critique, encouragements, and helpful suggestions.

## REFERENCES

Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. 1977. *A Pattern Language: Towns, Buildings, Construction*. New York: Oxford University Press.

Bayat, Asef. 1997. *Street Politics: Poor People's Movements in Iran*. New York: Columbia University Press.

———. 2004. "Globalization and the Politics of the Informals in the Global South." In *Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia*, edited by Ananya Roy and Nezar AlSayyad, 79–102. New York: Lexington.

Benjamin, Walter. 1978. *Reflections: Essays, Aphorisms, Autobiographical Writings*. Edited by Peter Demetz. Translated by Edmund Jephcott. New York: Harcourt Brace Jovanovich.

Bentley, Ian, Alan Alcock, Paul Murrain, Sue McGlynn, and Graham Smith. 1985. *Responsive Environments: A Manual for Designers*. London: Architectural Press.

Bobić, Miloš. 2004. *Between the Edges: Street-building Transition as Urbanity Interface*. Bussum: Thoth Publishers.

Brillembourg, Alfredo, and Hubert Klumpner. 2010. "Rules of Engagement: Caracas and the Informal City." In *Rethinking the Informal City: Critical Perspectives from Latin America*, edited by Felipe Hernández, Peter Kellett, and Lea K. Allen, 119–36. New York: Berghahn Books.

Carmona, Matthew. 2010. "Contemporary Public Space, Part Two: Classification." *Journal of Urban Design* 15 (2): 157–73.

Davis, Mike. 2006. *Planet of Slums*. London; New York: Verso.

De Landa, Manuel. 2005. "Space: Extensive and Intensive, Actual and Virtual." In *Deleuze and Space*, edited by Ian Buchanan and Greg Lambert, 80–88. Edinburgh: Edinburgh University Press.

———. 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity*. New York: Continuum.

Deleuze, Gilles, and Félix Guattari. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. Minneapolis: University of Minnesota Press.

Desai, Prasanna. 2010. "Housing Design through Community Consultation: Pune." *Context* 7 (2): 133–42.

Dovey, Kim. 2010. *Becoming Places: Urbanism/Architecture/Identity/Power*. London: Routledge.

———. 2013. "Informalising Architecture: The Challenge of Informal Settlements." *Architectural Design* 83 (6): 82–89.

———. 2016. *Urban Design Thinking: A Conceptual Toolkit*. New York: Bloomsbury Academic.

Dovey, Kim, and Ross King. 2011. "Forms of Informality: Morphology and Visibility of Informal Settlements." *Built Environment* 37 (1): 11–29.

Dovey, Kim, and Felicity Symons. 2013. "Density without Intensity and What to Do about It: Reassembling Public/Private Interfaces in Melbourne's Southbank Hinterland." *Australian Planner* 51 (1): 1–13.

Dovey, Kim, and Stephen Wood. 2015. "Public/Private Urban Interfaces: Type, Adaptation, Assemblage." *Journal of Urbanism: International Research on Placemaking and Urban Sustainability* 8 (1): 1–16.

Duarte, P. G. Buraglia. 2009. "Informal Settlements: A Neglected Aspect of Morphological Analysis." *Urban Morphology* 13 (2): 138–39.

Echeverri Restrepo, Alejandro, and Francesco M. Orsini. 2012. "Informality and Social Urbanism in Medellin." In *Medellin: Environment, Urbanism and Society*, edited by Michel Hermelin, Alejandro Echeverri Restrepo, and Jorge Giraldo Ramirez, translated

by Eduardo Cardenas and Daniel Hawkins, 132–56. Medellin: Urbam-Universidad EAFIT.

Gehl, Jan. 1987. *Life between Buildings: Using Public Space*. Translated by Jo Koch. New York: Van Nostrand Reinhold.

———. 2010. *Cities for People*. Washington, DC: Island Press.

Gehl, Jan, Lotte Johansen Kaefer, and Solvejg Reigstad. 2006. "Close Encounters with Buildings." *Urban Design International* 11 (1): 29–47.

Gehl, Jan, and Birgitte Svarre. 2013. *How to Study Public Life*. Translated by Karen Ann Steenhard. Washington, DC: Island Press.

Gilbert, Alan. 2004. "Love in the Time of Enhanced Capital Flows: Reflections on the Links between Liberalization and Informality." In *Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia*, edited by Ananya Roy and Nezar AlSayyad, 33–66. New York: Lexington.

Herriott, Robert E., and William A. Firestone. 1983. "Multisite Qualitative Policy Research: Optimizing Description and Generalizability." *Educational Researcher* 12 (2): 14–19.

Hillier, Bill, and Julienne Hanson. 1984. *The Social Logic of Space*. Cambridge: Cambridge University Press.

Jacobs, Jane. 1961. *The Death and Life of Great American Cities*. New York: Random House.

Kamalipour, Hesam. 2016a. "Forms of Informality and Adaptations in Informal Settlements." *International Journal of Architectural Research: ArchNet-IJAR* 10 (3): 60–75.

———. 2016b. "Urban Morphologies in Informal Settlements." *Contour* 3. http://contour.epfl.ch/wp-content/uploads/2016/11/Kamalipour_2016.pdf.

Kamalipour, Hesam, and Nastaran Peimani. 2015. "Assemblage Thinking and the City: Implications for Urban Studies." *Current Urban Studies* 3 (4): 402–8.

Kamalipour, Hesam, and M. Zaroudi. 2014. "Sociocultural Context and Vernacular Housing Morphology: A Case Study." *Current Urban Studies* 2 (3): 220–32.

Karimi, Kayvan, and Ed Parham. 2012. "An Evidence Informed Approach to Developing an Adaptable Regeneration Programme for Declining Informal Settlements." Paper presented at the Eighth International Space Syntax Symposium, PUC, Santiago, Chile.

Kelbaugh, Douglas. 2007. "Typology: An Architecture of Limits." In *Urban Design Reader*, edited by Matthew Carmona and Steven Tiesdell, 83–97. Burlington, MA: Elsevier/Architectural Press.

Lynch, Kevin. 1960. *The Image of the City*. Cambridge, MA: MIT Press.

Marshall, Stephen. 2009. *Cities, Design & Evolution*. London: Routledge.

Marshall, Stephen, and Olgu Çalişkan. 2011. "A Joint Framework for Urban Morphology and Design." *Built Environment* 37 (4): 409–26.

McFarlane, Colin. 2012. "Rethinking Informality: Politics, Crisis, and the City." *Planning Theory & Practice* 13 (1): 89–108.

McFarlane, Colin, and Michael Waibel. 2012. "Introduction: The Informal-Formal Divide in Context." In *Urban Informalities: Reflections on the Formal and Informal*, edited by Colin McFarlane and Michael Waibel, 1–12. Farnham: Ashgate.

Miller, George A. 1956. "The Magical Number Seven, plus or Minus Two: Some Limits on Our Capacity for Processing Information." *Psychological Review* 63 (2): 81–97.

Neuman, William Lawrence. 2011. *Social Research Methods: Qualitative and Quantitative Approaches*. 7th ed. Boston: Pearson.

Norberg-Schulz, Christian. 1980. *Genius Loci: Towards a Phenomenology of Architecture*. New York: Rizzoli.

Parnell, Susan, and Jennifer Robinson. 2012. "(Re)theorizing Cities from the Global South: Looking Beyond Neoliberalism." *Urban Geography* 33 (4): 593–617.

Peimani, Nastaran, and Hesam Kamalipour. 2016. "Where Gender Comes to the Fore: Mapping Gender Mix in Urban Public Spaces." *Spaces & Flows: An International Journal of Urban & Extra Urban Studies* 8 (1): 19–30.

Robinson, Jennifer. 2002. "Global and World Cities: A View from off the Map." *International Journal of Urban and Regional Research* 26 (3): 531–54.

Roy, Ananya. 2004. "Transnational Trespassings: The Geopolitics of Urban Informality." In *Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia*, edited by Ananya Roy and Nezar AlSayyad, 289–317. New York: Lexington.

———. 2005. "Urban Informality: Toward an Epistemology of Planning." *Journal of the American Planning Association* 71 (2): 147–58.

———. 2011. "Slumdog Cities: Rethinking Subaltern Urbanism." *International Journal of Urban and Regional Research* 35 (2): 223–38.

Sennett, Richard. 2011. "Boundaries and Borders." In *Living in the Endless City*, edited by Ricky Burdett and Sudjic Deyan, 324–31. London: Phaidon.

Simone, AbdouMaliq. 2009. *City Life from Jakarta to Dakar: Movements at the Crossroads*. Global Realities. New York, NY: Routledge.

Stevens, Quentin. 2006. "The Shape of Urban Experience: A Reevaluation of Lynch's Five Elements." *Environment and Planning B: Planning and Design* 33 (6): 803–23.

Tonkiss, Fran. 2013. *Cities by Design: The Social Life of Urban Form*. Cambridge: Polity.

UN-HABITAT. 2006. *The State of the World's Cities Report 2006/7: The Millennium Development Goals and Urban Sustainability*. London: Earthscan.

Yin, Robert K. 2003. *Case Study Research: Design and Methods*. 3rd ed. Thousand Oaks: Sage.

## ABOUT THE AUTHOR

***Hesam Kamalipour:*** PhD Candidate, Melbourne School of Design (MSD); Doctoral Academy Member, Melbourne Social Equity Institute (MSEI), University of Melbourne, Melbourne, Victoria, Australia

***Spaces and Flows: An International Journal of Urban and ExtraUrban Studies*** addresses some of the most pressing and perturbing social, cultural, economic and environmental questions of our times, focusing on spaces and flows as crucibles and vectors of ongoing transformation.

The journal discusses several central questions: What are the new and emerging spaces of production, consumption, and human living as communities, regions, and societies organize and re-organize in contemporary times? And what are the new flows of people, goods, services, information, and ideas? How are they being constructed and how are they functioning?

The issues addressed in the journal oscillate between the local and the global, the empirical and the theoretical, the utopian and the pragmatic, the disciplinary and the transdisciplinary, research and its application, and the practices of knowledge making and those of knowledge dissemination.

In addition to traditional scholarly papers, this journal invites case studies that take the form of presentations of practice—including documentation of spatial practices and exegeses analyzing the effects of those practices.

*Spaces and Flows: An International Journal of Urban and ExtraUrban Studies* is a peer-reviewed scholarly journal.



ISSN 2154-8676